

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method comprising:

producing image data in an imaging device coupled to a processor-based system by a serial bus ~~comprising a bandwidth of at least twelve million bits each second;~~

performing operations on the image data in the imaging device to obtain uncompressed processed ~~wherein the operations do not include compression of the image data;~~ and

transferring the uncompressed processed image data to the processor-based system through the serial bus.

Claim 2 (original): The method of claim 1, performing operations on the image data in the imaging device further comprising:

performing dead pixel substitution on the image data.

Claim 3 (original): The method of claim 1, performing operations on the image data in the imaging device further comprising:

performing dark current subtraction on the image data.

Claim 4 (original): The method of claim 1, performing operations on the image data in the imaging device further comprising:

quantizing the image data.

Claim 5 (original): The method of claim 1, performing operations on the image data in the imaging device further comprising:

performing contrast enhancement on the image data.

Claim 6 (original): The method of claim 1, performing operations on the image data in the imaging device further comprising:

performing scaled color interpolation on the image data.

Claim 7 (original): The method of claim 6, performing scaled color interpolation on the image data further comprising:

identifying a sub-block of a Bayer patterned sensor in the imaging device;
extracting a pair of green components from the sub-block; and
averaging the pair of green components to produce a new green component.

Claim 8 (original): The method of claim 7, further comprising:

extracting a red component from the sub-block;
extracting a blue component from the sub-block; and
producing a true-color pixel comprising the red component, the blue component, and the new green component.

Claim 9 (currently amended): The method of claim 1, further comprising:

performing operations on the uncompressed processed image data in the processor-based system.

Claims 10-15 (cancel)

Claim 16 (currently amended): An imaging device comprising:

a sensor to receive incident light and produce image data; and
an interface to connect the imaging device to a processor-based system, wherein the imaging device to process the image data and send ~~sends~~ uncompressed image data to the processor-based system using a serial bus comprising a bandwidth that exceeds twelve million bits each second.

Claim 17 (original): The imaging device of claim 16, wherein the interface is compliant with a Universal Serial Bus, Revision 2, specification.

Claim 18 (original): The imaging device of claim 16, further comprising:

a software program to operate on the uncompressed image data.

Claim 19 (currently amended): The imaging device of claim 18, further comprising a read-only memory wherein the software program to perform ~~performs~~ dead pixel substitution on the uncompressed image data using the read-only memory.

Claim 20 (currently amended): The imaging device of claim 19, wherein the software program to perform ~~performs~~ dark current subtraction on the uncompressed image data using the read-only memory.

Claim 21 (currently amended): The imaging device of claim 20, further comprising a look-up table, wherein the software program to use ~~uses~~ the look-up table to quantize the uncompressed image data.

Claim 22 (currently amended): The imaging device of claim 21, wherein the software program to perform ~~performs~~ contrast enhancement on the uncompressed image data using the look-up table.

Claim 23 (currently amended): The imaging device of claim 18, wherein ~~the image data is Bayer patterned and~~ the software program to perform ~~performs~~ color interpolation on the uncompressed image data according to instructions that: ~~by:~~

identify ~~identifying~~ a sub-block of the uncompressed image data;

average ~~averaging~~ a pair of green components in the sub-block to produce a new green component; and

produce ~~producing~~ a true-color pixel.

Claim 24 (original): The imaging device of claim 23, wherein the true-color pixel comprises:

a red component from the sub-block;

a blue component from the sub-block; and

the new green component.

Claim 25 (currently amended): An article comprising a medium to store ~~for storing~~ a software program that if executed enables ~~to enable~~ a processor-based system to:

produce image data;

perform operations on the image data to obtain uncompressed processed image data;
~~wherein the operations do not include compression;~~ and

transfer the uncompressed processed image data to a second processor-based system through a serial bus comprising a throughput of not less than twelve million bits each second.

Claim 26 (original): The article of claim 25, further storing the software program to enable the processor-based system to further:

optionally perform color interpolation in the processor-based system or in the second processor-based system.

Claim 27 (original): The article of claim 25, further storing the software program to enable the processor-based system to further:

perform dead pixel substitution in the processor-based system.

Claim 28 (original): The article of claim 25, further storing the software program to enable the processor-based system to further:

perform dark current subtraction in the processor-based system.

Claim 29 (original): The article of claim 25, further storing the software program to enable the processor-based system to further:

quantize the image data in the processor-based system.

Claim 30 (original): The article of claim 25, further storing the software program to enable the processor-based system to further:

perform contrast enhancement in the processor-based system.

Claim 31 (currently amended): The article of claim 25 ~~[[26]]~~, further storing the software program to enable the processor-based system to perform color interpolation ~~by~~
according to instructions that:

identify ~~identifying~~ a sub-block of Bayer-patterned image data;

average ~~averaging~~ a pair of green components in the sub-block to produce a new green component; and

combine ~~combining~~ the new green component with a red component from the sub-block and a blue component from the sub-block to produce a true-color pixel.

Claim 32 (currently amended): The article of claim 25 ~~[[26]]~~, further storing the software program to enable the processor-based system to transfer the image data to the ~~[[a]]~~ second processor-based system using a Universal Serial Bus, Revision 2, specification-compliant bus.

Claim 33 (new): The method of claim 6, further comprising determining whether to perform the scaled color interpolation based on a throughput of the uncompressed processed image data.

Claim 34 (new): The imaging device of claim 18, wherein the software program to determine whether to send color interpolated uncompressed image data or non-color interpolated uncompressed image data based on a throughput of the uncompressed image data.

Claim 35 (new): A method comprising:
producing image data in an imaging device coupled to a processor-based system;
performing at least one operation on the image data in the imaging device to obtain uncompressed processed image data;
transferring the uncompressed processed image data to the processor-based system;
determining if a greater throughput is needed; and
color interpolating the uncompressed processed image data before transferring the uncompressed processed image data if the greater throughput is needed.

Claim 36 (new): The method of claim 35, wherein the color interpolating comprises scaled color interpolation.

Claim 37 (new): The method of claim 36, the scaled color interpolation comprising:
identifying a sub-block of a Bayer patterned sensor in the imaging device;
extracting a pair of green components from the sub-block; and
averaging the pair of green components to produce a new green component.

Claim 38 (new): The method of claim 37, further comprising:

extracting a red component from the sub-block;
extracting a blue component from the sub-block; and
producing a true-color pixel comprising the red component, the blue component, and the new green component.